

WHAT IS CLAIMED IS:

1. A bag for use in centrifugal processing comprising a substantially circular enclosure having a central opening, wherein the central opening includes an integrally formed first mating portion for mating with a corresponding second mating portion of a hub.
2. The bag according to claim 1, wherein the first mating portion comprises an integrally molded radial barrier.
3. The bag according to claim 1, wherein the first mating portion comprises one or more recesses formed adjacent the opening and wherein the corresponding second mating portion is received by the one or more recesses.
4. The bag according to claim 1, wherein the first mating portion comprises one or more raised areas formed adjacent the opening and wherein the corresponding second mating portion receives the one or more raised areas.
5. The bag according to claim 2, wherein the radial barrier comprises a circumferential ring of raised material.
6. The bag according to claim 2, wherein the radial barrier comprises a circumferential recess.
7. The bag according to claim 1, wherein the bag includes a first side and a second side, and wherein each side include an opening for housing a respective side of the hub.
8. The bag according to claim 7, wherein each side includes a respective first mating portion for mating with a corresponding second mating portion of a respective side of the hub.
9. The bag according to claim 8, wherein the first mating portion comprises one or more recesses formed adjacent to a respective opening and wherein a respective corresponding second mating portion is received by the one or more recesses.
10. The bag according to claim 7, wherein a respective first mating portion comprises one or more raised areas formed adjacent to a respective opening and wherein a respective corresponding second mating portion receives the one or more raised areas.

11. The bag according to claim 1, wherein the bag is used as either or both of a processing and/or expressor bag.
12. The bag according to claim 7, further comprising at least one weld ring having a central opening for receiving a first side of the hub and a surface positioned adjacent the first side of the bag proximate the opening of the first side.
13. A bag for use in centrifugal processing comprising:
  - a substantially circular enclosure having a central opening, wherein the central opening includes an integrally formed first mating portion; and
  - a hub having a second mating portion corresponding to the first mating portion.
14. The bag according to claim 13, wherein the first mating portion comprises an integrally molded radial barrier.
15. The bag according to claim 13, wherein the first mating portion comprises one or more recesses formed adjacent to the opening and wherein the corresponding second mating portion is received by the one or more recesses.
16. The bag according to claim 13, wherein the first mating comprises one or more raised areas formed adjacent to the opening and wherein the corresponding second mating portion receives the one or more raised areas.
17. The bag according to claim 14, wherein the radial barrier comprises a circumferential ring of raised material.
18. The bag according to claim 14, wherein the radial barrier comprises a circumferential recess.
19. The bag according to claim 13, wherein the bag includes a first side and a second side, and wherein each side include an opening for housing a respective side of the hub.

20. The bag according to claim 19, wherein each side includes a respective first mating portion for mating with a corresponding second mating portion of a respective side of the hub.
21. The bag according to claim 20, wherein the first mating portion comprises one or more recesses formed adjacent to a respective opening and wherein a respective corresponding second mating portion is received by the one or more recesses.
22. The bag according to claim 20, wherein a respective first mating portion comprises one or more raised areas formed adjacent to a respective opening and wherein a respective corresponding second mating portion receives the one or more raised areas.
23. The bag according to claim 19, further comprising at least one weld ring having a central opening for receiving a first side of the hub and a surface positioned adjacent the first side of the bag proximate the opening of the first side.
24. A centrifuge comprising:
  - one or more bags for housing a material to be separated, wherein each bag comprises a substantially circular enclosure having a central opening, wherein the central opening includes an integrally formed first mating portion; and
  - one or more corresponding hubs, wherein each hub includes a second mating portion corresponding to the first mating portion of a respective bag.
25. The centrifuge according to claim 24, wherein the first mating portion comprises an integrally molded radial barrier.
26. The centrifuge according to claim 24, wherein the first mating portion comprises one or more recesses formed adjacent to the opening and wherein the corresponding second mating portion is received by the one or more recesses.
27. The centrifuge according to claim 24, wherein the first mating portion comprises one or more raised areas formed adjacent to the opening and wherein the corresponding second mating portion receives the one or more raised areas.

28. The centrifuge according to claim 25, wherein the radial barrier comprises a circumferential ring of raised material.
29. The centrifuge according to claim 25, wherein the radial barrier comprises a circumferential recess.
30. A method of sealing a centrifuge bag to a hub, comprising:
  - providing a bag for use in centrifugal processing, wherein the bag comprises a substantially circular enclosure having a central opening, wherein the central opening includes an integrally formed first mating portion; and
  - providing a hub having a second mating portion corresponding to the first mating portion;
  - placing the hub within the opening;
  - applying a layer of an adhesive material to at least one of the first mating portion and the second mating portion; and
  - mating the first mating portion with the second mating portion;
  - curing the adhesive material.
31. The method according to claim 30, further comprising curing the adhesive.
32. The method according to claim 30, wherein curing comprising applying at least one of heat, ultraviolet light and/or pressure to the mating portions.
33. The method according to claim 30, further comprising applying a layer of the adhesive around all or a portion of the opening.
34. A method of sealing a centrifuge bag to a hub, comprising:
  - providing a bag for use in centrifugal processing, wherein the bag comprises a substantially circular enclosure having a central opening, wherein the central opening includes a first mating portion; and
  - providing a hub having a second mating portion corresponding to the first mating portion;

placing the hub within the opening; and

mating the first mating portion with the second mating portion.

35. The method according to claim 34, wherein mating comprises welding the first mating portion to the second mating portion
36. The method according to claim 34, further comprising providing at least one weld ring having a central opening for receiving a first side of the hub and a surface positioned adjacent the first side of the bag proximate the opening of the first side.
37. The method according to claim 36, wherein mating comprises welding the weld ring to the hub.
38. The method according to claim 34, wherein mating comprises adhering the first mating portion to the second mating portion using at least one of heat, solvent bonding, pressure, ultra-violet light and adhesive.
39. A hub for use with a centrifugal bag comprising one or more channels for directing fluids into and/or out of a centrifuge bag, and an integrally formed first mating portion for mating with a corresponding second mating portion of the centrifuge bag.
40. The hub according to claim 39, wherein the first mating portion comprises an integrally molded radial barrier.
41. The hub according to claim 39, wherein the first mating portion comprises one or more recesses and wherein the corresponding second mating portion is received by the one or more recesses.
42. The hub according to claim 39, wherein the first mating comprises one or more raised areas formed adjacent the opening and wherein the corresponding second mating portion receives the one or more raised areas.
43. The hub according to claim 40, wherein the radial barrier comprises a circumferential ring of raised material.
44. The hub according to claim 40, wherein the radial barrier comprises a circumferential recess.

45. The hub according to claim 39, wherein the hub includes a first side and a second side, and wherein each side include a respective first mating portion for mating with a respective second mating portion of each side of a centrifuge bag.
46. The hub according to claim 45, wherein the first mating portion comprises one or more recesses wherein a respective corresponding second mating portion is received by the one or more recesses.
47. The hub according to claim 45, wherein the first mating portion comprises one or more raised areas and wherein a respective corresponding second mating portion receives the one or more raised areas.
48. The hub according to claim 39, further comprising at least one weld ring having a central opening for receiving a first side of the hub and a surface positioned adjacent the second mating portion of the bag proximate the hub.